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PRAIRIE DOGS AND THEIR CONTROL

The prairie dog is a stocky, robust, fat, short-tailed, short-legged ground squirrel of the family SCIURIDAE, genus Cynomys. It is native to the Great Plains region from southern Saskatchewan to northern Mexico. The common name, "prairie dog" is derived from its natural habitat and characteristic bark when alarmed. The genus is not represented elsewhere in the world and only six species and subspecies are known. Adults are from eight to twelve inches in body length with a tail 3-4 inches long. They weigh from two to three pounds. Color is a sandy cinnamon with a grizzling of black and buff. The underparts are a buffy white. One subgenus has a black tipped tail and the other a white tip, thus the name "black-tailed" or "white-tailed" prairie dogs. Young are born in the spring, usually from 5 to 8 in number. Natural foods are grasses and green vegetation, roots, tubers, and seeds. Internal cheek pouches are present. The animals do not go into a true hibernation and some are usually found on top of the ground, even in the snow on any warm, bright winter day.

Habits

Social in habits, prairie dogs live in colonies usually referred to as "towns." These communities are made up of individual burrows four to eight inches in diameter. Mouths of the burrows are usually built up with earth to form a conical mound. In heavily populated towns, burrows may number twenty or more per acre. In the early 1900's, towns comprising a hundred or more square miles were not uncommon. Though these have been largely broken up because of their adverse effects on agriculture, towns covering several square miles are not rare even today. Students of the social habits of these animals find that "towns" are divided into what may be termed "precincts", and animals from one precinct are unwelcome in another. The towns spread and grow both by perimeter expansion and by migration of individuals. Surprisingly, the expansion and migration is principally by adult animals - not the young. Migrations are most evident in the spring and fall of the year; a few individuals may start new towns as much as ten miles from their former colony. Such migration is apparently individual movement and not a mass pilgrimage. In midsummer or fall it is not uncommon to surprise one or two prairie dogs several miles from any "town" without even a burrow for shelter.

Prairie dogs keep the grass eaten off in their towns to a point that livestock are unable to find forage. During unfavorable seasons, native grasses are killed out, leaving the ground barren or supporting only unpalatable weeds. Crops planted within 300-500 yards of a town may suffer severely both from feeding and wallowing down the crop plants. Most feeding is done outside the burrow, the animals sitting up alertly on their haunches and at frequent intervals nibbling food held in the front paws. Food to be stored is pouched in the cheeks and carried to the burrows.

It is not unusual for a prairie dog town to become "dead" within a few months for no visible reason. It is suspected that disease is the principal cause of these die-offs. Prairie dogs are hosts to a number of external parasites some of which have been found positive for sylvatic plague in certain localities.

Control

The most practical control agents are poisoned bait and poison gasses. The latter are more effective in warm, humid weather than in dry or cold weather. Poisoned grain bait may be effective at any time of the year when animals are active above ground. However, temperature and weather have a great influence on activity, and better control work is attained during the summer and fall after the green grass stage of early spring has passed. Young dogs do not take grain well for six to eight weeks after birth. Considering all these factors, large scale projects are best carried on from approximately June 15 to September 1.

Principal bait materials are whole oats, steam-crushed oats, and maize. Prairie dogs hull oats before eating the groats. Since the application of a poison to bait material always reduces acceptance to some extent, it is well to run an initial test with clean grain to determine which bait material will be best accepted in any locality.

Several kinds of poisons are used on the different species in various parts of the country. One of these may be prepared as follows:

Dry gloss starch.....	1 heaping tablespoonful
Strychnine (alkaloid).....	1 ounce
Baking soda.....	1 ounce
Corn sirup.....	1/4 pint
Glycerine.....	1 tablespoonful
Clean heavy oats.....	16 quarts

Dissolve the dry gloss starch in a little cold water and add 3/4 pint of hot water. Boil, stirring constantly, until a thin clear paste is formed. Mix together the powdered strychnine (alkaloid) and baking soda, sift into the hot starch paste, and stir to a smooth creamy mass. Add the corn syrup and glycerine and stir thoroughly. Pour this mixture over the oats and mix so that each grain is evenly coated. It is important that only the best grade of clean oats free of weed seeds be used, as chaff absorbs and wastes much valuable strychnine, and poisoned weed seeds not only imperil useful bird life but also propagate undesirable weeds. Information regarding sources of materials and other poison formulations useful for controlling specific species of prairie dogs may be obtained through field offices of the Fish and Wildlife Service.

Each quart of the prepared grain is sufficient to treat about 40 prairie dog holes. This quantity should be scattered sparingly on clean hard ground near the holes. Do not place the poison on loose or dusty ground or in the holes. With reasonable care in scattering the bait, livestock on the open range will not be endangered.

With rare exceptions, bait that is going to be effective will be eaten within 24 hours. Unsatisfactory control is usually caused by poor acceptance of the bait rather than through any fault of the lethal agent. Where poor acceptance is noted, it is best to wait a month or two, prebait with an acceptable unpoisoned bait, then use another lethal agent. In some localities prairie dogs may not eat grain bait. The Zuni prairie dog of the southwest is notoriously erratic in this respect. Such situations are sometimes corrected by doing control work very early or late in the season, by prebaiting once or more, by waiting for another season, or by the slow and expensive gassing or shooting. Normally, there are some individuals remaining after any poisoned grain treatment. Ninety-five percent or more is considered a good kill, though 100 percent kill of individual towns is not unusual. Remaining animals usually congregate in some portion of the towns after several weeks and can then be either repoisoned, gassed, or shot.

Prairie dogs may also be killed with calcium cyanide. This material generates a deadly poisonous gas and is usually effective in control work. A tablespoonful should be inserted in the burrow, and the entrance then covered with a piece of sod or other material, making sure that the cyanide is not covered. Calcium cyanide is a highly dangerous substance and should be used with extreme caution.

Another successful method for controlling prairie dogs is the use of the exhaust from an automobile. One end of a hose is attached to the exhaust pipe and the other end inserted in the burrow. Carbon monoxide gas generated by the motor soon penetrates the burrow and kills the prairie dogs quickly. This method is practicable where only a few prairie dogs are causing the trouble.

C A U T I O N

All utensils used in the preparation of poisons and all poison containers should be kept plainly labeled and out of the reach of children, irresponsible persons, and livestock.

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